Mechanical Oil Removal

Objective:	To remove oil from shorelines, and bottom sediments using mechanical equipment.
Description:	Oil and oiled sediments are collected and removed using mechanical equipment not specifically designed for pollution response, such as backhoes, graders, bulldozers, dredges, draglines, etc. Requires systems for temporary storage, transportation, and final treatment and disposal.
Applicable Habitat Types:	On land, possible wherever surface sediments are both amenable to, and accessible by, heavy equipment. For submerged oil, used in sheltered areas where oil accumulates. On water, used on viscous or solid contained oil.
When to Use:	When large amounts of oiled materials must be removed. Care should be taken to remove sediments only to the depth of oil penetration, which can be difficult with heavy equipment. Should be used carefully where excessive sediment removal may erode the beach or shore. Buried oil lift-off consists of removing clean overburden and oiled sediments, and replacing them with clean overburden. Care is also needed to minimize further oil penetration from uncontrolled vehicle traffic.
Biological Constraints:	Heavy equipment use may be restricted in sensitive habitats (e.g., wetlands, soft substrates) or areas containing endangered species. Will need special permission to use in areas with known cultural resources. Dredging in seagrass beds or coral reef habitats may be prohibited. The noise generated by the mechanical equipment may present a constraint as well.

Mechanical Oil Removal (cont.)

Environmental Effects:	The equipment is heavy, with many support personnel required. May be detrimental if excessive sediments are removed without replacement. All organisms in the sediments will be affected, although the need to remove the oil may make this response method the best overall alternative. Resuspension of exposed oil and fine-grained, oily sediments can affect adjacent bodies of water.
Waste Generation:	Can generate significant quantities of contaminated sediment and debris that must be cleaned or landfilled. The amount of waste generated by this cleanup option should be given careful consideration by response planners when reviewing potential environmental impacts of the oily wastes, debris, and residues.